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EXAMINER	
VAN HANDEL, MICHAEL P	
ART UNIT	PAPER NUMBER
2623	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/07/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	09/865,136	LAKSONO, INDRA	
	Examiner	Art Unit	
	Michael Van Handel	2623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 December 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-63* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-63* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. This action is responsive to an Amendment filed 12/05/2006. Claims **1-63** are pending. Claims **28**, **34** are amended. The examiner hereby withdraws the objection to claim **28** in light of the amendment.

Response to Arguments

1. Applicant's arguments regarding claims **1**, **16**, **28**, **37**, and **52**, filed 12/05/2006, have been fully considered, but they are not persuasive.

Regarding claims **1**, **16**, **37**, and **52**, the applicant argues that Knowles et al. does not disclose processing data of the channel of interest based on type of channel to produce generic data. The examiner respectfully disagrees. The applicant specifically argues that the MPEG decoder elements 14-16 of Knowles et al. can only process one type of channel, an MPEG encoded channel and can only process this type of channel in one way, by MPEG decoding. Knowles et al. discloses a single set-top box that receives digital TV signals and converts them into analog video and audio drive signals (col. 6, l. 49-50). As digital data streams are received, they are depacketized by depacketizer 2 resulting in audio and video data streams. The data stream is fed to the three tuners 11-13 and the output of each tuner is decoded by the MPEG decoders 14-16. The decoded audio and video data is then fed to the display generator, which outputs the video and audio data to the respective TV receiver 17-19 (col. 7, l. 20-31 & Fig. 1B). Thus, Knowles et al. processes MPEG data based on the fact that data streams are MPEG

streams. The examiner acknowledges the applicant's argument that Knowles et al. can only process MPEG encoded channels and can only process this type of channel in one way; however, the examiner notes that the claim language fails to necessitate an ability to process alternate data streams in addition to MPEG data streams. As such, the examiner maintains that Knowles et al. meets the limitation of "processing data of the channel of interest based on type of channel to produce generic data," as currently claimed.

Further regarding claims **1**, **16**, **37**, and **52**, the applicant argues that the combination of Chen and Mizutani et al. fails to teach processing data of a channel of interest based on the type of channel to produce generic data. The examiner respectfully disagrees. Mizutani et al. teaches an MPEG video decoder that decodes a video stream input and outputs it to an NTSC encoder (col. 8, l. 46-52). Mizutani et al. further teaches an MPEG audio decoder that decodes an audio stream supplied from the demultiplexer in an MPEG system (col. 8, l. 53-59). The examiner acknowledges the applicant's argument that these MPEG decoders can only process one type of channel, an MPEG encoded channel and can only process this type of channel by MPEG decoding; however, the examiner notes that the claim language fails to necessitate an ability to process alternate data streams in addition to MPEG data streams. As such, the examiner maintains that Mizutani et al. meets the limitation of "processing data of the channel of interest based on type of channel to produce generic data," as currently claimed and therefore suitably remedies the deficiencies of Chen.

Regarding claim **28**, the applicant argues that Humpleman does not disclose a data transcoding module operably coupled to convert the generic data of the at least one channel into a stream of data having a specific data format. The applicant specifically argues that, while

channel data may be converted from an external protocol to an internal protocol, protocol conversion does not alter the coding of the data or provide transcoding from one code to another. The examiner respectfully disagrees. Humpleman discloses network interface units that demultiplex a single program transport from a multiple program transport stream and perform external network to home network conversion (col. 3, l. 64-66). The examiner notes that transcoding is the process of converting a media file or object from one format to another (see the definition of "transcoding" at http://www.webopedia.com). Furthermore, the examiner notes that a protocol is an agreed-upon format for transmitting data between two devices (see the definition of "protocol at http://www.webopedia.com). Thus, in contrast to the applicant's argument, the examiner finds that the coding of data is altered when converting between protocols. Since Humpleman discloses converting a single program transport from an external network, such that it can be transferred on a home network, the examiner maintains that Humpleman meets the limitation of a "data transcoding module operably coupled to convert the generic data of the at least one channel into a stream of data having a specific data format," as currently claimed.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims **1**, **8**, **16** and **21** are rejected under 35 U.S.C. 102(e) as being anticipated by Knowles et al. (U.S. 6505348 B1).

Regarding claim **1**, Knowles teaches a method for channel mixing in a multimedia system the method comprises:

receiving a set of channels as encoded channel data (Figure 1B elements 13, 12, and 11 teaches a tuners and Column 6 lines 49-52 teaches the set top box receiving TV signals/channels);

interpreting the encoded channel data to identify a channel of interest of the set of channels based on a specific channel selection request (Figure 1B elements 13, 12, and 11 teach tuners that are receiving packets or information Column 7 lines 20-22 teaches the depacketizer converting the data stream into packets of information and the tuners needs to determine/interpret which packets to allow through);

processing data of the channel of interest based on type of channel to produce generic data (Column 7 lines 26-28 and Figure 1B teaches MPEG decoders elements 14-16 processing the incoming signal);

converting the generic data into a stream of data (Figure 1B teaches the display generator element 9 taking in three processed signals and outputting the information onto one line to the display generator, Column 7 lines 12-14 teaches the DMA is a multiplexing circuit and when a signals are multiplexed to together they are converted from multiple streams of data to one stream of data).

Referring to claim **8**, depending on claim 1, Knowles teaches interpreting the encoded channel data to identify a series of channels of interest from the set of channels based on the corresponding series of channel requests (Figure 1B elements 13, 12, and 11 teach tuners that are receiving packets or information Column 7 lines 20-22 teaches the depacketizer converting the data stream into packets of information and the tuners needs to determine/interpret which packets to allow through);

Processing data of each of the series of channel interest based on the type of channel of each of the channels of the series of channels of interest to produce a series of generic data (Column 7 lines 26-28 and Figure 1B teaches MPEG decoders elements 14-16 processing the incoming signal); and

converting the series of generic data into streams of data (Figure 1B teaches the display generator element 9 taking in three processed signals and outputting the information onto one line to the display generator, Column 7 lines 12-14 teaches the DMA is a multiplexing circuit and when a signals are multiplexed to together they are converted from multiple streams of data to one stream of data).

Referring to claim **16**, Knowles teaches a method for channel mixing in a multimedia system the method comprises:

receiving a set of channels as encoded channel data (Figure 1B elements 13, 12, and 11 teaches a tuners and Column 6 lines 49-52 teaches the set top box receiving TV signals/channels);

interpreting the encoded channel data to identify a channel of interest of the set of channels based on a specific channel selection request (Figure 1B elements 13, 12, and 11 teach tuners that are receiving packets or information Column 7 lines 20-22 teaches the depacketizer converting the data stream into packets of information and the tuners needs to determine/interpret which packets to allow through);

separate the channel of interest from a set of channels based on the type of data (Figure 1B elements 12, 12, and 11 are tuners and a tuners function is to filter/separate out a channel of information from many channels of information);

processing data of the channel of interest based on type of channel to produce generic data (Column 7 lines 26-28 and Figure 1B teaches MPEG decoders elements 14-16 processing the incoming signal);

converting the generic data into a stream of data (Figure 1B teaches the display generator element 9 taking in three processed signals and outputting the information onto one line to the display generator, Column 7 lines 12-14 teaches the DMA is a multiplexing circuit and when a signals are multiplexed to together they are converted from multiple streams of data to one stream of data).

Referring to claim **21**, depending on claim 16, see rejection of claim 8.

3. Claims **28-36** are rejected under 35 U.S.C. 102(e) as being anticipated by Humpleman (U.S. 6005861).

Regarding claim **28**, the claimed limitations are met by the multiple NIUs, which can provide software to support the external network (such as the packet based networks discussed above) and home network protocols for multiple streams and multiple users [col. 9, lines 60-62]. Each of the packets of data inherently contains a packet header for identifying which source the data originated from and which format the data is in for conversion to the home network data protocol, hence the reason for the software for converting between the external network protocol and the home network protocol. Furthermore, the MPEG transport stream is demultiplexed down into a single stream at the NIU, in order to accommodate the user service request. This demultiplexing is done using the channel request information provided by the user [col. 9, lines 55-57]. In other words, the MPEG stream is parsed into a one-channel stream and is converted from the external network protocol to the home network protocol. The MPEG stream is chosen based on the user selection request.

Regarding claim **29**, all of the functionality of claim 28 still applies, and the limitations of claim 29 are further met by the buffering of the received data in the NIU in order to provide a standard interface to the terminals on the home network 10 [col. 7, lines 11-13].

Regarding claim **30**, the claimed limitations are met by the discussion of the MPEG-2 transport stream being filtered and demultiplexed to produce the specific MPEG-2 transport channel of interest based on the user service selection [col. 9, lines 55-57]. Also, the NIU 32 is responsible for performing external network specific interfacing, tuning demodulation, and error

correction in order to provide the received encoded channel data over generic home network 10 (Ethernet) [col. 9, lines 49-53].

Regarding claim **31**, the claimed interpreter is met by the transformer, which serves to transform the received data into the generic data for transmission over the home network [col. 9, lines 15-19].

Regarding claim **32**, again, the claimed limitation is met by the transformer and filter 84, which serves to transform the received data into the generic data for transmission over the home network and map a transmit path for the data [col. 9, lines 15-19].

Regarding claim **33** and **34**, the claimed limitation is met by the transformer 84, which acts to transform the received data into the generic data for transmission over the home network and map a transmit path for the data [col. 9, lines 15-19]. Also, note the MPEG decoder 70 of the set-top electronics 40, which functions to decode the received MPEG video at the STB.

Regarding claim **35**, the claimed system bus is met by the bus 94, for providing the received data from the network 34 to the MPEG decoder 70 [col. 9, lines 11-14].

Regarding claim **36**, the claimed limitation of the digital to analog converter is met by the digital to analog conversion for audio and video data at the set-top electronics 40 [col. 10, lines 5-7].

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims **37**, **44**, **52**, and **57** are rejected under 35 U.S.C. 103(a) as being unpatentable over Knowles et al. (U.S 6505348 B1) in view of Schupak (U.S. 6069621).

Regarding claim **37**, Knowles teaches an apparatus (Figure 1B) for channel mixing in a multimedia system (According to Figure 1B the display generator outputs signals to TV elements 17, 18, and 19 onto one line so the signals have to be multiplexed or mixed together), the apparatus comprises:

Processing module (Figure 1B element 10); and

Memory operably coupled to the processing module (), wherein the memory includes operational instructions that cause the processing module to:

receiving a set of channels as encoded channel data (Figure 1B elements 13, 12, and 11 teaches a tuners and Column 6 lines 49-52 teaches the set top box receiving TV signals/channels);

interpreting the encoded channel data to identify a channel of interest of the set of channels based on a specific channel selection request (Figure 1B elements 13, 12, and 11 teach tuners that are receiving packets or information Column 7 lines 20-22 teaches the depacketizer

converting the data stream into packets of information and the tuners needs to determine/interpret which packets to allow through);

processing data of the channel of interest based on type of channel to produce generic data (Column 7 lines 26-28 and Figure 1B teaches MPEG decoders elements 14-16 processing the incoming signal);

converting the generic data into a stream of data (Figure 1B teaches the display generator element 9 taking in three processed signals and outputting the information onto one line to the display generator, Column 7 lines 12-14 teaches the DMA is a multiplexing circuit and when a signals are multiplexed to together they are converted from multiple streams of data to one stream of data).

Knowles fails to teach memory operably coupled to the processing module, wherein the memory operational instructions that cause the processing module to receive, interpret, process, and convert.

In an analogous art Schupak teaches memory operably coupled to the processing module (Figure 3 teaches element 8 which is a CPU and a CPU requires memory to operate), wherein the memory operational instructions that cause the processing module to receive (Figure 3 teaches the CPU being connected to the tuners 26a-26c and tuners receive data), interpret (Figure 3 teaches the CPU being connected to the tuners 26a-26c which interpret the incoming signals to determine which signals can pass through), process (Figure 3 teaches the CPU being connected to descramblers 27a-27c which process the incoming signals), and convert (Figure 3 teaches the CPU being connected to element 28 a multiplexer which converts the individual signals into a signal stream of data).

At the time the invention was made it would have been obvious for one skilled in the art to modify the set top box function/device of Knowles using the processing function/device of Schupak for the purpose of being able to control the tuner in response to a user input (Column 3 lines 9-12, Schupak).

Referring to claim **44**, depending on claim 37, Knowles teaches interpreting the encoded channel data to identify a series of channels of interest from the set of channels based on the corresponding series of channel requests (Figure 1B elements 13, 12, and 11 teach tuners that are receiving packets or information Column 7 lines 20-22 teaches the depacketizer converting the data stream into packets of information and the tuners needs to determine/interpret which packets to allow through);

Processing data of each of the series of channel interest based on the type of channel of each of the channels of the series of channels of interest to produce a series of generic data (Column 7 lines 26-28 and Figure 1B teaches MPEG decoders elements 14-16 processing the incoming signal); and

converting the series of generic data into streams of data (Figure 1B teaches the display generator element 9 taking in three processed signals and outputting the information onto one line to the display generator, Column 7 lines 12-14 teaches the DMA is a multiplexing circuit and when a signals are multiplexed to together they are converted from multiple streams of data to one stream of data).

Regarding claim **52**, Knowles teaches an apparatus (Figure 1B) for channel mixing in a multimedia system (According to Figure 1B the display generator outputs signals to TV elements 17, 18, and 19 onto one line so the signals have to be multiplexed or mixed together), the apparatus comprises:

Processing module (Figure 1B element 10); and

Memory operably coupled to the processing module (), wherein the memory includes operational instructions that cause the processing module to:

receiving a set of channels as encoded channel data (Figure 1B elements 13, 12, and 11 teaches a tuners and Column 6 lines 49-52 teaches the set top box receiving TV signals/channels);

interpreting the encoded channel data to identify a channel of interest of the set of channels based on a specific channel selection request (Figure 1B elements 13, 12, and 11 teach tuners that are receiving packets or information Column 7 lines 20-22 teaches the depacketizer converting the data stream into packets of information and the tuners needs to determine/interpret which packets to allow through);

separate the channel of interest from a set of channels based on the type of data (Figure 1B elements 12, 12, and 11 are tuners and a tuners function is to filter/separate out a channel of information from many channels of information);

processing data of the channel of interest based on type of channel to produce generic data (Column 7 lines 26-28 and Figure 1B teaches MPEG decoders elements 14-16 processing the incoming signal);

converting the generic data into a stream of data (Figure 1B teaches the display generator element 9 taking in three processed signals and outputting the information onto one line to the display generator, Column 7 lines 12-14 teaches the DMA is a multiplexing circuit and when a signals are multiplexed to together they are converted from multiple streams of data to one stream of data).

Knowles fails to teach memory operably coupled to the processing module, wherein the memory operational instructions that cause the processing module to receive, interpret, separate, process, and convert.

In an analogous art Schupak teaches memory operably coupled to the processing module (Figure 3 teaches element 8 which is a CPU and a CPU requires memory to operate), wherein the memory operational instructions that cause the processing module to receive (Figure 3 teaches the CPU being connected to the tuners 26a-26c and tuners receive data), interpret (Figure 3 teaches the CPU being connected to the tuners 26a-26c which interpret the incoming signals to determine which signals can pass through), separate (Figure 3 teaches the CPU connected to the tuners which are doing the separating), process (Figure 3 teaches the CPU being connected to descramblers 27a-27c which process the incoming signals), and convert (Figure 3 teaches the CPU being connected to element 28 a multiplexer which converts the individual signals into a signal stream of data).

At the time the invention was made it would have been obvious for one skilled in the art to modify the set top box function/device of Knowles using the processing function/device of Schupak for the purpose of being able to control the tuner in response to a user input (Column 3 lines 9-12, Schupak).

Referring to claim **57**, depending on claim 52, see rejection of claim 44.

3. Claims **1**, **9**, **15**, **16**, **22**, **25**, **27**, **37**, **45**, **51**, **52**, **58**, **61** and **63** are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen et al. (EP 0952734 A2) in view of Mizutani et al. (U.S. 6925500 B1).

Referring to claim **1**, Chen teaches a method for channel mixing in a multimedia system, the method comprises:

receiving a set of channels as encoded channel data (Figure 3 teaches element 128 a receiver receiving communication signal 140 and paragraph [0023] teaches signal 140 is between the television element 100 and 120 in Figure 1);

interpreting the encoded channel data to identify a channel of interest of the set of channels based on a specific channel selection request (Page 6, Column 9, lines 37-41 teaches the TCD can select certain streams to output; Column 9 lines 6-9 teaches a TCD selecting/interpreting a particular stream (Figure 3 element 124) based on its PID/header on the fact that it selected the stream, Column 9 lines 24-27 and Figure 2 element 114 teach a back channel being used to communicate information from element 120 to element 100);

Chen fails to teach processing data of the channel of interest based on type of channel to produce generic data, and converting the generic data into a stream of data.

Mizutani teaches processing data of the channel of interest based on type of channel to produce generic data (Column 8 lines 53-57 teaches element 54 in Figure 2

demultiplexing/processing the incoming MPEG signal into generic audio and video data), and converting the generic data into a stream of data (For a channel that is an audio channel Column 8 lines 53-57 teaches element 58 in Figure 2 processing the generic MPEG audio signal into a PCM signal and Column 8 lines 47-52 teaches for a received channel that is a video channel the data is converted into NTSC data stream).

At the time the invention was made it would have been obvious for one skilled in the art to modify the receiving system of Chen with the processing and converting system of Mizutani for the purpose of preparing the data for conversion into an analog signal.

Referring to claim **9**, depending on claim 1, Mizutani teaches when the type of data is single channel compressed video, converting the video data of the channel of interest into generic video data (Column 8 lines 47-52 teaches for a received channel that is a video channel the data is converted into NTSC data stream).

Referring to claim **15**, depending on claim 1, Chen teaches determining the channel of interest is compressed among multiple compressed video channels (Column 9 lines 5-9);

Receiving a control signal indicating the type of processing of the data of the channel of interest (Column 9 lines 5-9 teaches the processor element 134 controlling the Selector element 124); and

When the control signal indicated multiple channel processing:

Decompressing the multiple compressed video channels to produce multiple channels (Column 9 lines 37-41 teaches the TCD being able to receive and output multiple streams and

the streams would have to be decompressed since they are in MPEG format according to Column 8 lines 28-38);

Chen fails to teach processing data of the multiple channels based on the type of channel to produce multiple generic data; and converting the multiple generic data into the stream of data.

Mizutani teaches processing data of the channel of interest based on type of channel to produce generic data (Column 8 lines 53-57 teaches element 54 in Figure 2 demultiplexing/processing the incoming MPEG signal into generic audio and video data), and converting the generic data into a stream of data (For a channel that is an audio channel Column 8 lines 53-57 teaches element 58 in Figure 2 processing the generic MPEG audio signal into a PCM signal and Column 8 lines 47-52 teaches for a received channel that is a video channel the data is converted into NTSC data stream).

Referring to claim **16**, Chen teaches a method for channel mixing in a multimedia system, the method comprises:

receiving a set of channels as encoded channel data (Figure 3 teaches element 128 a receiver receiving communication signal 140 and paragraph [0023] teaches signal 140 is between the television element 100 and 120 in Figure 1);

interpreting the encoded channel data to identify a channel of interest of the set of channels based on a specific channel selection request (Page 6, Column 9, lines 37-41 teaches the TCD can select certain streams to output; Column 9 lines 6-9 teaches a TCD selecting/interpreting a particular stream (Figure 3 element 124) based on its PID/header on the

fact that it selected the stream, Column 9 lines 24-27 and Figure 2 element 114 teach a back channel being used to communicate information from element 120 to element 100);

separate the channel of interest from a set of channels based on the type of data (Page 6, Column 9, lines 37-41 teaches the TCD can select certain streams to output; Column 9 lines 6-9 teaches a TCD selecting/interpreting a particular stream (Figure 3 element 124) based on its PID/header on the fact that it selected the stream, Column 9 lines 24-27 and Figure 2 element 114 teach a back channel being used to communicate information from element 120 to element 100);

processing data of the channel of interest based on type of channel to produce generic data (Figure 3 teaches elements 125 and 126 which are);

converting the generic data into a stream of data (Figure 2 teaches elements 230 and 235 converting/decoding the MPEG data).

Chen fails to teach processing data of the channel of interest based on type of channel to produce generic data, and converting the generic data into a stream of data.

Mizutani teaches processing data of the channel of interest based on type of channel to produce generic data (Column 8 lines 53-57 teaches element 54 in Figure 2 demultiplexing/processing the incoming MPEG signal into generic audio and video data), and converting the generic data into a stream of data (For a channel that is an audio channel Column 8 lines 53-57 teaches element 58 in Figure 2 processing the generic MPEG audio signal into a PCM signal and Column 8 lines 47-52 teaches for a received channel that is a video channel the data is converted into NTSC data stream).

At the time the invention was made it would have been obvious for one skilled in the art to modify the receiving system of Chen with the processing and converting system of Mizutani for the purpose of preparing the data for conversion into an analog signal.

Referring to claim **22**, depending on claim 16, see rejection of claim 9.

Referring to claim **25**, depending on claim 16, Mizutani teaches when the type of data is single channel compressed video, converting the generic video data of the channel of interest into the specific video data (Column 8 lines 47-52 teaches for a received channel that is a video channel the data is converted into NTSC data stream).

Referring to claim **27**, depending on claim 16, see rejection of claim 15.

Referring to claim **37**, Chen teaches a processing module (Element 134 in figure 3); and

Memory operably coupled to the processing module (A processor inherently requires memory to be coupled to it to store the software that controls the processor's functions, memory has to exist at all levels of the device or else the device would not function), wherein the memory includes operational instructions that cause the processing module to:

receiving a set of channels as encoded channel data (Figure 3 teaches element 128 a receiver receiving communication signal 140 and paragraph [0023] teaches signal 140 is between the television element 100 and 120 in Figure 1);

interpreting the encoded channel data to identify a channel of interest of the set of channels based on a specific channel selection request (Page 6, Column 9, lines 37-41 teaches the TCD can select certain streams to output; Column 9 lines 6-9 teaches a TCD selecting/interpreting a particular stream (Figure 3 element 124) based on its PID/header on the fact that it selected the stream, Column 9 lines 24-27 and Figure 2 element 114 teach a back channel being used to communicate information from element 120 to element 100);

Chen fails to teach processing data of the channel of interest based on type of channel to produce generic data, and converting the generic data into a stream of data.

Mizutani teaches processing data of the channel of interest based on type of channel to produce generic data (Column 8 lines 53-57 teaches element 54 in Figure 2 demultiplexing/processing the incoming MPEG signal into generic audio and video data), and converting the generic data into a stream of data (For a channel that is an audio channel Column 8 lines 53-57 teaches element 58 in Figure 2 processing the generic MPEG audio signal into a PCM signal and Column 8 lines 47-52 teaches for a received channel that is a video channel the data is converted into NTSC data stream).

At the time the invention was made it would have been obvious for one skilled in the art to modify the receiving system of Chen with the processing and converting system of Mizutani for the purpose of preparing the data for conversion into an analog signal.

Referring to claim **45**, depending on claim 37, see rejection of claim 9.

Referring to claim **51**, depending on claim 37, see rejection of claim 15.

Referring to claim **52**, Chen teaches a processing module (Element 134 in figure 3); and

Memory operably coupled to the processing module (A processor inherently requires memory to be coupled to it to store the software that controls the processor's functions, memory has to exist at all levels of the device or else the device would not function), wherein the memory includes operational instructions that cause the processing module to:

receiving a set of channels as encoded channel data (Figure 3 teaches element 128 a receiver receiving communication signal 140 and paragraph [0023] teaches signal 140 is between the television element 100 and 120 in Figure 1);

interpreting the encoded channel data to identify a channel of interest of the set of channels based on a specific channel selection request (Page 6, Column 9, lines 37-41 teaches the TCD can select certain streams to output; Column 9 lines 6-9 teaches a TCD selecting/interpreting a particular stream (Figure 3 element 124) based on its PID/header on the fact that it selected the stream, Column 9 lines 24-27 and Figure 2 element 114 teach a back channel being used to communicate information from element 120 to element 100);

separate the channel of interest from a set of channels based on the type of data (Page 6, Column 9, lines 37-41 teaches the TCD can select certain streams to output; Column 9 lines 6-9 teaches a TCD selecting/interpreting a particular stream (Figure 3 element 124) based on its PID/header on the fact that it selected the stream, Column 9 lines 24-27 and Figure 2 element 114 teach a back channel being used to communicate information from element 120 to element 100);

Chen fails to teach processing data of the channel of interest based on type of channel to produce generic data, and converting the generic data into a stream of data.

Mizutani teaches processing data of the channel of interest based on type of channel to produce generic data (Column 8 lines 53-57 teaches element 54 in Figure 2 demultiplexing/processing the incoming MPEG signal into generic audio and video data), and converting the generic data into a stream of data (For a channel that is an audio channel Column 8 lines 53-57 teaches element 58 in Figure 2 processing the generic MPEG audio signal into a PCM signal and Column 8 lines 47-52 teaches for a received channel that is a video channel the data is converted into NTSC data stream).

At the time the invention was made it would have been obvious for one skilled in the art to modify the receiving system of Chen with the processing and converting system of Mizutani for the purpose of preparing the data for conversion into an analog signal.

Referring to claim **58**, depending on claim 52, see rejection of claim 22.

Referring to claim **61**, depending on claim 52, see rejection of claim 25.

Referring to claim **63**, depending on claim 52, see rejection of claim 27.

4. Claims **2-5**, **17**, **18**, **38-41**, **53** and **54** are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen et al. (EP 0952734 A2) in view of Mizutani et al. (U.S. 6925500 B1) further in view of Schupack (U.S. 6069621).

Referring to claim **2**, depending on claim 1, Chen teaches receiving the set of channels by receiving packets of the encoded channel data, and wherein each of the packets includes a header portion and payload portion (Column 9 lines 5-9 teaches the TCD element 120 in Figure 1 receiving streams and Column 5 lines 11-14 teaches the streams are MPEG which is packetized information; Newtons Telecom Dictionary teaches a packet has a header and a payload); and

interpreting the encoding channel data by interpreting information of the header portion of the packets to identify individual channels of the set of channels (Page 6, Column 9, lines 37-41 teaches the TCD can select certain streams to output; Column 9 lines 6-9 teaches a TCD selecting/interpreting a particular stream (Figure 3 element 124) based on its PID/header on the fact that it selected the stream, Column 9 lines 24-27 and Figure 2 element 114 teach a back channel being used to communicate information from element 120 to element 100).

Chen and Mizutani fail to teach channel data includes channel data from a plurality of tuners associated with a multimedia source.

Shupack teaches channel data includes channel data from a plurality of tuners associated with a multimedia source (Figure 3 teaches element 22 a multimedia source which includes elements 26a-26c a plurality of tuners, Column 3 lines 56-58).

At the time the invention was made it would have been obvious for one skilled in the art to modify the combined methods of Chen and Mizutani using the tuners associated with a multimedia source for the purpose of providing a computer for supplying any of a tuned channel to a plurality of televisions and/or audio components (Column 2 lines 14-19, Schupak).

Referring to claim **3**, depending on claim 2, Chen teaches identifying the channel of interest as one of the individual channels of the set of channels based on the information of the header portion (Page 6, Column 9, lines 37-41 teaches the TCD can select certain streams to output; Column 9 lines 6-9 teaches a TCD selecting/interpreting a particular stream (Figure 3 element 124) based on its PID/header on the fact that it selected the stream, Column 9 lines 24-27 and Figure 2 element 114 teach a back channel being used to communicate information from element 120 to element 100).

Referring to claim **4**, depending on claim 3, Chen teaches reading an identifier for the channel of interest from the header portion of the packet to identify the channel of interest (Page 6, Column 9, lines 37-41 teaches the TCD can select certain streams to output; Column 9 lines 6-9 teaches a TCD selecting/interpreting a particular stream (Figure 3 element 124) based on its PID/header on the fact that it selected the stream, Column 9 lines 24-27 and Figure 2 element 114 teach a back channel being used to communicate information from element 120 to element 100).

Referring to claim **5**, depending on claim 2, Chen teaches identifying, based on the information of the header portion, one of the individual channels of the set of channels that contains a group of compressed video channels, wherein the channel of interest is within the group of compressed video channels (Page 6, Column 9, lines 37-41 teaches the TCD can select certain streams to output; Column 9 lines 6-9 teaches a TCD selecting/interpreting a particular stream (Figure 3 element 124) based on its PID/header on the fact that it selected the stream,

Column 9 lines 24-27 and Figure 2 element 114 teach a back channel being used to communicate information from element 120 to element 100; Column 5 lines 11- 14 teaches the streams 185 are MPEG-2, thus a compressed stream); and

Isolating the channel of interest from the group of compressed video channels (Column 9 lines 5-9).

Referring to claim **17**, depending on claim 16, see rejection of claim 2.

Referring to claim **18**, depending on claim 17, see rejection of claim 4.

Referring to claim **38**, depending on claim 37, see rejection of claim 2.

Referring to claim **39**, depending on claim 38, see rejection of claim 3.

Referring to claim **40**, depending on claim 39, see rejection of claim 4.

Referring to claim **41**, depending on claim 38, see rejection of claim 5.

Referring to claim **53**, depending on claim 52, see rejection of claim 17.

Referring to claim **54**, depending on claim 54, see rejection of claim 18.

5. Claims **6**, **7**, **19**, **20**, **42**, **43**, **55** and **56** are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen et al. (EP 0952734 A2) in view of Mizutani et al. (U.S. 6925500 B1) further in view of Hazra (U.S. 6510553 B1).

Referring to claim **6**, depending of claim 1, Chen teaches receiving the set of channels by receiving packets of the encoded channels data, (Column 9 lines 5-9 and Column 5 lines 11-14 teaches the channel data is encoded as MPEG-2 data which is also packetized data), and

Wherein each of the packets includes a header portion and payload portion (Newtons Telecom Dictionary teaches a packet has a header and a payload);

Interpreting the encoded channel data by interpreting information of the header portion of the packets to identify type of data of each channel (Column 9 lines 5-9 teaches interpreting the encoded channel data); and

determining filtering requirements to identify the channel of interest based on the type of data (Column 9 lines 5-9 teaches interpreting the encoded channel data by looking at the PID of the streams to determine which streams to select).

Chen and Mizutani fail to teach encoded channel data includes channels data from a plurality of sources.

Hazra teaches encoded channel data includes channels data from a plurality of sources (Figure 1 and Column 3 lines 53-55).

At the time the invention was made it would have been obvious for one skilled in the art to modify the combined methods of Chen and Mizutani using the data from multiple sources of

Hazra for the purpose of allowing a viewer to view picture in picture on their display (Column 2 lines 6-14, Hazra).

Referring to claim **7**, depending on claim 6, Chen teaches when the type of data is multi-channel compressed video, filtering the multi-channel compressed video to produce the channel of interest (Page 6, Column 9, lines 37-41 teaches the TCD can select certain streams to output; Column 9 lines 6-9 teaches a TCD selecting/interpreting a particular stream (Figure 3 element 124) based on its PID/header on the fact that it selected the stream, Column 9 lines 24-27 and Figure 2 element 114 teach a back channel being used to communicate information from element 120 to element 100; Column 5 lines 11- 14 teaches the streams 185 are MPEG-2, thus a compressed stream).

Referring to claim **19**, depending on claim 16, see rejection of claim 6.

Referring to claim **20**, depending on claim 19, see rejection of claim 7.

Referring to claim **42**, depending on claim 37, see rejection of claim 6.

Referring to claim **43**, depending on claim 42, see rejection of claim 7.

Referring to claim **55**, depending on claim 52, see rejection of claim 19.

Referring to claim **56**, depending on claim 55, see rejection of claim 20.

6. Claims **10**, **11**, **23**, **24**, **46**, **47**, **59** and **60** are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen et al. (EP 0952734 A2) in view of Mizutani et al. (U.S. 6925500 B1) further in view of Wang (U.S. 2001/0013131 A1).

Referring to claim **10**, depending on claim 9, Chen and Mizutani fail to teach converting the video data of the channel of interest into digital RGB video data.

Wang teaches converting the video data of the channel of interest into digital RGB video data (Paragraph [0036] and Figure 4 element 44).

At the time the invention was made it would have been obvious for one skilled in the art to modify the combined systems of Chen and Mizutani with the stream converter of Wang for the purpose of being able to input a video signal directly into a display screen (Paragraph [0036], Wang).

Referring to claim **11**, depending on claim 9, Chen and Mizutani fail to teach converting the video data of the channel of interest into digital RGB video data.

Wang teaches coverting the audio data of the channel of interest into PCM digitized audio data (Paragraph [0035] and Figure 4 element 45).

At the time the invention was made it would have been obvious for one skilled in the art to modify the combined systems of Chen and Mizutani with the stream converter of Wang for the purpose of being able to convert the audio PCM signal into an analog signal (Paragraph [0022], Wang).

Referring to claim **23**, depending on claim 22, see rejection of claim 10.

Referring to claim **24**, depending on claim 22, see rejection of claim 11.

Referring to claim **46**, depending on claim 45, see rejection of claim 10.

Referring to claim **47**, depending on claim 45, see rejection of claim 11.

Referring to claim **59**, depending on claim 58, see rejection of claim 11.

Referring to claim **60**, depending on claim 58, see rejection of claim 11.

7. Claims **12**, **13**, **48** and **49** are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen et al. (EP 0952734 A2) in view of Mizutani et al. (U.S. 6925500 B1) further in view of Moroney et al. (U.S. 6532593 B1).

Referring to claim **12**, depending on claim 1, Chen and Mizutani fail to teach determining the type of data of the channel of interest; and converting the generic data into the stream of data based on the type of data.

Moroney teaches determining the type of data of the channel of interest (Column 3 lines 28-36 teaches transcoding from MPEG –1 to MPEG-2, in order of the transcoder to be able to do this it first would have to determine the format the signal of interest is in to begin with); and converting the generic data into the stream of data based on the type of data (Column 3 lines 28-36).

At the time the invention was made it would have been obvious for one skilled in the art to modify the combined methods of Chen and Mizutani with the transcoding method of Moroney for the purpose of allow a user to store one or more programs at a set-top terminal for subsequent playback at the user's convenience (Column 1 lines 41-44, Moroney).

Referring to claim **13**, depending on claim 12, Moroney teaches when the type of data is single channel compressed video converting the generic video data of the channel of interest into the specific video data (Column 3 lines 28-36).

Referring to claim **48**, depending on claim 37, see rejection of claim 12.

Referring to claim **49**, depending on claim 48, see rejection of claim 13.

8. Claims **14** and **50** are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen et al. (EP 0952734 A2) in view of Mizutani et al. (U.S. 6925500 B1) further in view of Moroney et al. (U.S. 6532593 B1) further in view of Tamura et al (U.S. 5801776).

Referring to claim **14**, depending on claim 13, Chen, Mizutani, and Moroney, fail to teach performing a motion prediction on the generic video data to produce motion prediction data; performing a discrete cosine transform on the motion prediction data to produce DCT data; quantizing the DCT data to produce quantized data; zigzag processing the quantized data to produce ZZ data; Huffman encoding the ZZ data to produce the specific video data.

In an analogous art Tamura teaches performing a motion prediction on the generic video data to produce motion prediction data (Column 11 lines 9-24); performing a discrete cosine transform on the motion prediction data to produce DCT data; quantizing the DCT data to produce quantized data (Column 11 lines 9-24); zigzag processing the quantized data to produce ZZ data (Column 11 lines 9-24); Huffman encoding the ZZ data to produce the specific video data (Column 11 lines 9-24).

At the time the invention was made it would have been obvious for one skilled in the art to modify the combined methods/systems of Chen, Mizutani, and Moroney using the generic video conversion function/device of Tamura for the purpose of aid in the compression of the video and in order to have video data that was generically compressed and functional.

Referring to claim **50**, depending on claim 49, see rejection of claim 14.

9. Claims **26** and **62** are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen et al. (EP 0952734 A2) in view of Mizutani et al. (U.S. 6925500 B1) further in view of Tamura et al (U.S. 5801776).

Referring to claim **26**, depending on claim 25, Chen and Mizutani fail to teach performing a motion prediction on the generic video data to produce motion prediction data; performing a discrete cosine transform on the motion prediction data to produce DCT data; quantizing the DCT data to produce quantized data; zigzag processing the quantized data to produce ZZ data; Huffman encoding the ZZ data to produce the specific video data.

In an analogous art Tamura teaches performing a motion prediction on the generic video data to produce motion prediction data (Column 11 lines 9-24); performing a discrete cosine transform on the motion prediction data to produce DCT data; quantizing the DCT data to produce quantized data (Column 11 lines 9-24); zigzag processing the quantized data to produce ZZ data (Column 11 lines 9-24); Huffman encoding the ZZ data to produce the specific video data (Column 11 lines 9-24).

At the time the invention was made it would have been obvious for one skilled in the art to modify the combined methods/systems of Chen and Mizutani using the generic video conversion function/device of Tamura for the purpose of aid in the compression of the video and in order to have video data that was generically compressed and functional.

Referring to claim **62**, depending on claim 61, see rejection of claim 26.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Van Handel whose telephone number is 571-272-5968. The examiner can normally be reached on 8:00am-5:30pm Mon.-Fri..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Kelley can be reached on 571-272-7331. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MVH

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